

## **Appendix E**

### **Transportation Methodology, Supplemental Information on Existing Conditions And Transportation Projects under the No Action and Action Alternatives**

## Methodology

### EXISTING AND FUTURE TRAFFIC VOLUMES

Existing and future daily and peak-hour traffic volumes were provided for key arterial locations in the Overlake Neighborhood study area. Existing (2005) traffic volumes were provided by the cities of Bellevue and Redmond. Traffic volumes for the 2030 No Action and Action Alternatives were forecast using the Bellevue, Kirkland, and Redmond (BKR) Travel Demand Model. The BKR model includes planned land uses for the cities of Bellevue, Redmond, and Kirkland in 2030 and accounts for the growth citywide and in surrounding areas, as well as the central Puget Sound Region.

To evaluate the alternatives, the land uses in the Overlake area in the BKR model were changed to reflect the different land use growth and the transportation network assumptions associated with each alternative.

The following regional transportation network improvements were assumed to be implemented by 2030 under both the No Action and Action Alternatives:

- **I-405:** Provide one additional lane in each direction on I-405 through Downtown Bellevue and one additional lane north of NE 10th Street and south of NE 2nd Street. Provide two new half-interchanges at NE 2nd Street (to and from the south) and NE 10th Street (to and from the north). Provide grade-separated braided ramps between SR 520 and NE 8th Street to physically separate the entering and exiting vehicles and eliminate the existing weave; this improvement is known as the *I-405 Implementation Plan* (WSDOT, 2005).
- **SR 520:** Provide a six-lane, tolled facility across Lake Washington between I-5 and Bellevue Way (four general purpose lanes and two HOV lanes).

### TRANSIT

As part of its recently adopted *ST2 Plan*, Sound Transit is proposing to build an LRT line through the Bel-Red Corridor in the Bellevue and Overlake area to Downtown Redmond—known as the East Link Project. However, it is still unclear when the LRT line would be built through the Overlake area. Therefore, the LRT line is not assumed in the No Action Alternative, but it is included in the Action Alternative. Since the BKR model includes the East Link LRT line in the 2030 base model, the East Link LRT line was removed from the No Action Alternative for the Overlake Neighborhood Plan Update.

The BKR model has the ability to forecast changes in the number of transit riders and ridesharing persons (carpooling and vanpooling). This model within the BKR model is

referred to as the mode split model. When the performance of this model was examined for use in analysis of the Overlake Neighborhood Plan Update, it was found that the BKR's mode split model was not suitable to use for the trips traveling in and out of the Overlake area for the following reasons:

- The BKR model forecast of 9.3 percent is on the high side for the existing transit mode share, for the trips generated by and attracted to the Overlake area. The survey data for the area indicated that the existing transit mode share is in the range of 3 to 4 percent. On the other hand, the 2030 transit mode share of 15.1 percent might be acceptable, if extensive transit service to and from Overlake area were implemented.
- The existing high occupancy vehicle (carpools and vanpools) mode share of 8.7 percent in the BKR model for the Overlake area is low, compared with survey data. The high occupancy vehicle mode share in the 2030 BKR model was forecast to decrease to 3.0 percent. It appeared that this figure was too low to be considered as a reasonable rideshare mode share for the Overlake area.

As the result of this analysis, a reasonable set of mode share percentages for transit and high occupancy vehicle modes were selected for the alternatives in the Overlake Area. The mode shares derived from the BKR model were applied for the rest of the areas.

## **TYPE AND INTENSITY OF LAND USE**

Trip generation is directly affected by the type and intensity of land use. Different types of land use, such as residential, office, retail, and industrial all have different propensities to generate trips. The intensity of development also causes variations in trip generation - the more building development per unit of land (floor area ratios), the higher the number of trips generated on a specific parcel of land. Even with equal floor area ratios and the same type of land use, the trip generation for a specific parcel can vary because of the number of employees that occupy a building. The number of employees that occupy a building can vary depending on the type of activity taking place in the building: the higher the number of employees, the higher the number of trips generated.

The BKR model builds in assumptions that tend to focus on averaging the variations described above. Input to the trip generation model is the square feet of floor space for different commercial land use types and the number of dwelling units for residential land uses. The amount of floor space is converted to numbers of employees by applying vacancy factors and the average number of employees per 1,000 square feet of floor space. The assumption made in the modeling process is that for a traffic analysis zone, the average number of employees will fairly represent the mix in employment densities of the individual land use parcels.

## Base Year Model (2005) Validation Effort

In July 2006, the City of Bellevue provided the City of Redmond the files that define the BKR model. These files represented, at the time, the baseline no action conditions for Bellevue's Bel-Red Corridor Study. Using the data files and EMM/2 software, the Overlake Neighborhood Plan Update consultant ran the following models:

- 2005 BKR base year model
- 2030 BKR model

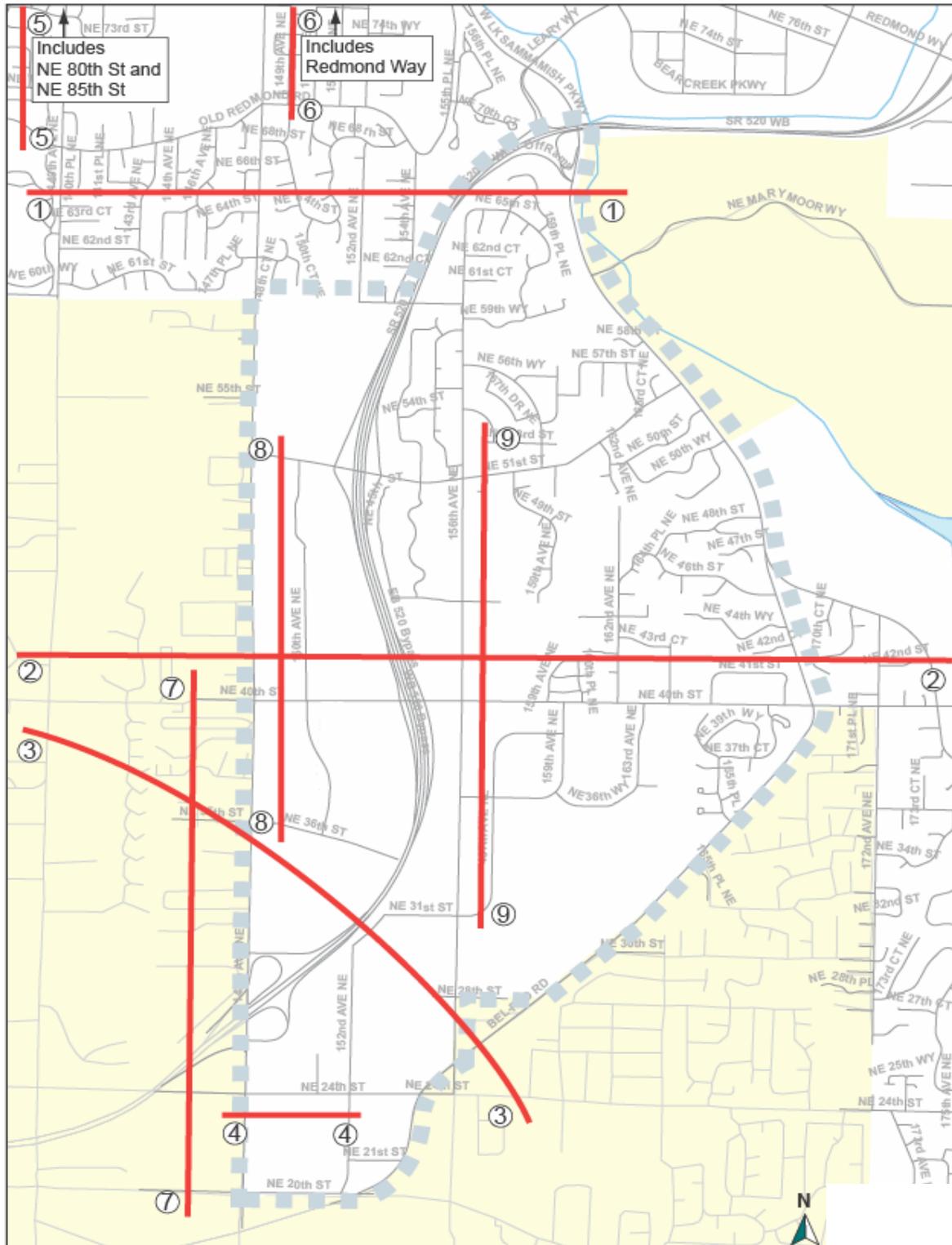
## SCREENLINE ANALYSIS

The Overlake Neighborhood Plan Update study established 9 screenlines in the Overlake area to validate the 2005 base year model. These screenlines are shown in **Figure A-1**. A series of traffic assignments on the BKR roadway network showed that:

- The traffic volumes assigned to the roadway network in the Overlake area by the BKR's 2005 base year model were significantly higher than those observed in the existing (2005) traffic counts.
- The vehicle trips generated by the existing land use in the Overlake area through the BKR model were higher by roughly 20 percent. It appears that high-tech businesses that dominate the Overlake area seem to generate many fewer trips during a typical afternoon peak hour (between 4:30 and 5:30 PM) than general office use.

To reflect the reality that PM peak hour trip generation in the Overlake area is lower, a factor of 0.8 was applied to the 2005 vehicle trip table to the zones within the Overlake area, which reduced the BKR model's trip generation rates by 20 percent. **Table A-1** shows the traffic volumes from the BKR base year (2005) model with the existing counts at the screenlines with the initial run, and with the final run with the 20 percent trip reductions after making adjustments in the roadway network in the Overlake area.

Figure A-1. Screenlines for Overlake Modeling



**Table A-1. Comparisons of Model Volumes with Existing Counts at Overlake Area Screenlines (the Initial runs from the BKR and the Final run)**

	<u>Direction</u>	<u>Existing Counts</u>	<u>Model Volumes (Initial Run)</u>	<u>Ratio (Model Volumes/ Existing Counts)</u>	<u>Model Volumes (Final Run)</u>	<u>Difference Between Existing Counts and Model Volumes</u>
Screenline 1	Northbound	8,424	11,400	1.35	9,557	+13%
	Southbound	5,427	6,811	1.26	6,238	+15%
Screenline 2	Northbound	7,181	10,936	1.52	7,413	+3%
	Southbound	5,664	7,804	1.38	5,309	-6%
Screenline 3	Northbound	7,499	9,736	1.30	8,053	+7%
	Southbound	7,860	8,347	1.06	7,566	-4%
Screenline 4	Northbound	1,496	1,676	1.12	1,432	-6%
	Southbound	2,073	1,722	0.83	1,669	-19%
Screenline 5	Eastbound	2,079	2,005	0.96	2,032	-2%
	Westbound	2,850	2,040	0.72	2,037	-29%
Screenline 6	Eastbound	1,921	1,808	0.94	1,703	-11%
	Westbound	1,456	1,093	0.75	1,102	-24%
Screenline 7	Eastbound	6,479	7,239	1.12	6,590	+2%
	Westbound	6,505	7,001	1.08	6,309	-3%
Screenline 8	Eastbound	1,063	1,868	1.76	1,624	+53%
	Westbound	2,224	1,926	0.87	1,568	-30%
Screenline 9	Eastbound	1,886	3,101	1.64	2,223	+18%
	Westbound	2,521	3,151	1.25	2,447	-3%

### EXISTING MODE SHARES

The BKR model's existing mode shares for the trips generated in the Overlake area were examined. **Table A-2** shows the PM peak hour mode shares for the Overlake area in the BKR 2005 Base Year Model. For comparison purposes this table also shows the region-wide, PM peak period average mode shares in the PSRC 2000 regional model.

Significant differences between the two models for the mode share figures were found. It should be noted that the BKR model is a one-hour model whereas the PSRC model is a peak-period (3-hour) model, although both model figures represent the region-wide mode share average.

**Table A-2. BKR Model 2005 Base Year Mode Shares for the Overlake Area, Compared with PSRC 2000 Regional Model Mode Shares**

Mode	BKR Model - 2005 PM Peak Hour (Overlake Area Only)				PSRC Model - 2000 PM Peak Period (Puget Sound Region)			
	Person Trips	Percent	Vehicle Trips	Percent	Person Trips	Percent	Vehicle Trips	Percent
Drive Alone	24,316	81.98%	24,316	95.85%	1,519,742	56.17%	1,519,742	77.55%
HOV	2,582	8.71%	1,054	4.15%	1,066,531	39.42%	439,975	22.45%
Transit	2,761	9.31%			119,522	4.41%		
Total	29,659	100.00%	25,370	100.00%	2,705,795	100.00%	1,959,717	100.00%

## SECOND BASE YEAR VALIDATION EFFORT

The base year model was revalidated in the Overlake area with a new vehicle trip table to make it more consistent with the observed mode-splits. The vehicle trip table was modified with the following mode share assumptions:

- Drive Alone: 84.5 percent of all person trips generated in the Overlake area
- High occupancy vehicle (HOV): 12.0 percent of all person trips generated in the Overlake area
- Transit: 3.5 percent of all person trips generated in the Overlake area

The new vehicle trip table, with the above mode share assumptions and the 20 percent vehicle trip reduction factor to the zones in the Overlake area was assigned to the 2005 roadway network. The resulting traffic volumes were compared against the existing traffic counts. **Table A-3** shows the revised validation results.

**Table A-3. Validation Results with the Revised Mode Share Assumptions**

	<b>Direction</b>	<b>Existing Counts</b>	<b>Model Volumes</b>	<b>Difference between Existing Counts and Model Volumes</b>
Screenline 1	Northbound	8,424	9,256	+1%
	Southbound	5,427	5,750	+6%
Screenline 2	Northbound	7,181	9,291	+29%
	Southbound	5,664	6,089	+8%
Screenline 3	Northbound	7,499	7,916	+10%
	Southbound	7,860	6,778	-7%
Screenline 4	Northbound	1,496	1,645	+1%
	Southbound	2,073	1,934	-7%
Screenline 5	Eastbound	2,079	1,966	-5%
	Westbound	2,850	1,978	-30%
Screenline 6	Eastbound	1,921	1,469	-24%
	Westbound	1,456	777	-46%
Screenline 7	Eastbound	6,479	6,200	-4%
	Westbound	6,505	5,731	-12%
Screenline 8	Eastbound	1,063	1,130	+6%
	Westbound	2,224	1,396	-37%
Screenline 9	Eastbound	1,886	2,122	+13%
	Westbound	2,521	2,563	+2%

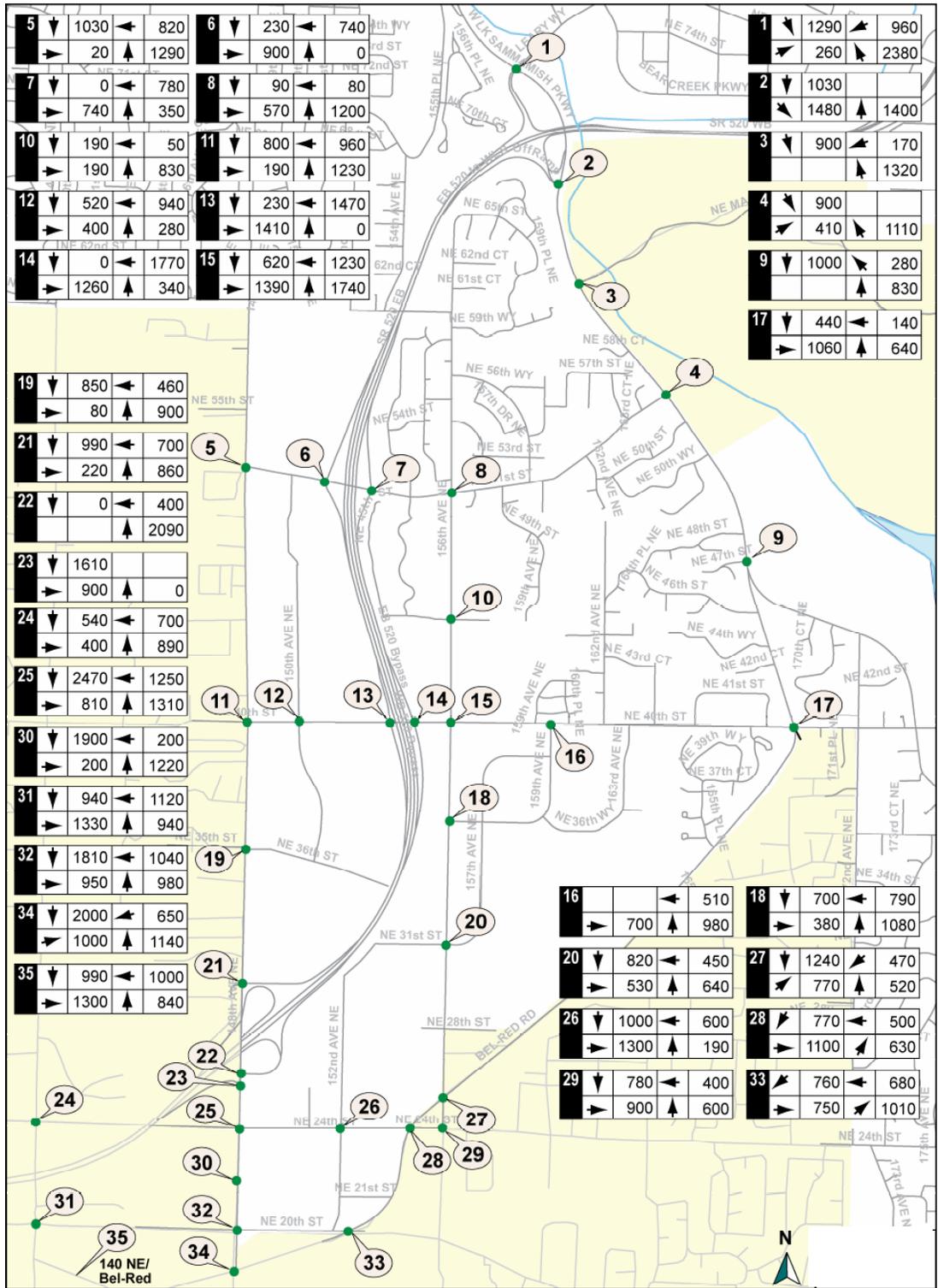
## Existing Conditions

This section supplement information related to the existing transportation conditions described in Section 3.8.3 in the SEIS.

### Existing Traffic Volumes

In order to calculate existing operation and concurrency levels of service in the Overlake study area, PM peak hour traffic volumes were obtained from City of Redmond and City of Bellevue. When inconsistencies in the traffic volumes were found, the City of Redmond conducted new traffic counting for this study. **Figure A-4** illustrates the existing PM peak hour intersection approach volumes. It should be noted that the traffic volumes on 148th Avenue NE in the southbound direction between Bel-Red Road and SR 520 were increased by about 150 vehicles during the PM peak hour. It is estimated that those increased volumes represent the traffic demand that they were not counted during the one hour period because of traffic congestion.

**Figure A-4. Existing (2005) PM Peak Hour Traffic Volumes at Intersection Approaches**



## **TRANSIT FACILITIES AND SERVICES**

### **Park and Ride Lots**

Within the City of Redmond, there are two types of park and ride lots: permanent lots which are provided by a public agency, such as WSDOT, or a transit agency; and lots at churches or other entities where parking spaces are not used during weekdays are leased for use by commuters. Two permanent park and ride lots in the Overlake area serve as hubs where connections can be made between regional, intercommunity, and local transit services. They are Overlake Park and Ride Lot and Overlake Transit Center at NE 40th Street.

The Overlake Park and Ride Lot, with 203 spaces, is located along 152nd Avenue NE north of NE 24th Street. As a part of King County Metro's transit oriented development (TOD), this park and ride lot was King County's first completed project that constructed structures to accommodate housing above the park and ride lot. Among the bus routes that serve this park and ride are: King County (KC) Metro 222, 242, 247, 249, 250, 253, 261, 269; and Community Transit 441. As of the 4th quarter 2006, the utilization rate was 28%.

The Overlake Transit Center/Park and Ride Lot is located at the southwest corner of the 156th Avenue NE and NE 40th Street intersection, between the two Microsoft campuses. Sound Transit maintains all 170 parking stalls provided for park and ride purpose. The bus routes that serve this transit center include: KC Metro 222, 225, 229, 230, 232, 233, 245, 247, 256, 268, 269, 644; Community Transit: 441; and Sound Transit 545, 564, 565. As of the 4th quarter 2006, the utilization rate was 106%.

A leased lot might only serve one or two routes, or it might be a meeting place for vanpools and carpools. Currently, WSDOT, King County and Sound Transit do not have any leased park and ride lots in the Overlake area.

### **Transit Stops and Shelters**

In urban areas, King County Metro's guidelines are four to six bus stops per mile. Sound Transit's stops are less frequent due to their regional service and coverage. All bus stops are located along arterials with the exception of the routes that use the local streets in the Microsoft campus. For Overlake, the stops are located along 148th Avenue NE, 152nd Avenue NE, 156th Avenue NE, 159th Avenue NE, West Lake Sammamish Parkway, NE 51st Street, NE 40th Street, NE 36th Street, NE 31st Street, NE 24th Street and NE 20th Street. In addition to the arterial bus stops, freeway flyover stations are located along SR 520 at the on- and off-ramps for NE 40th and NE 51st Street.

Bus shelters are provided at the Overlake Park and Ride and Overlake Transit Center. For other locations, King County Metro’s current standard calls for the agency to provide bus shelters at bus stops that have 50 boardings per day.

**Transit Service**

King County Metro, Community Transit and Sound Transit currently provide bus service within the Overlake area. King County Metro provides all of the local and regional service. All three transit agencies provide express regional service to other areas of the metropolitan area. Disabled riders who cannot take accessible fixed-route service can take Metro’s para-transit van service. In addition to public transit, Microsoft, the major employer in Overlake, provides a private shuttle service connecting their campuses to the Overlake Park and Ride, Overlake Transit Center and other major destinations in the surrounding area.

Local Service offers connections to major destinations in Redmond with only one stop in an adjacent municipality. All routes except for route 269 have 30-minute headways during the peak period. Route 269 operates during the weekday, peak hour only and makes connections to Issaquah. The other four routes connect to Bellevue and also run on the weekends. All routes make connections at either the Overlake Park and Ride or the Overlake Transit Center. **Table A-4** shows the local routes with service levels.

**Table A-4. 2005 Local Routes**

2006 Routes	Origin	Destination	Overlake Park and Ride*	Peak frequency (minutes)	Weekend Service
222	Redmond	Bellevue	1 and 2	30	Y
233	Redmond	Bellevue	2	30	Y
249	Redmond	Bellevue	2	30	Y
253	Redmond	Bellevue	1	30	Y
269	Redmond	Issaquah	1 and 2	60	N

Shaded rows indicate routes that operate during the AM and PM peak hour only.

\* 1 =Overlake Park and Ride 2 = Overlake Transit Center

Regional Service offers connections to regional destinations in the Puget Sound Region. All routes have 45 minute or less headway during the peak period. Only route 230 and 245 operate all day and weekend service. Route 232 operates only during the weekday peak periods. The remaining three routes operate in the peak period in the peak direction only. All routes make connections at either the Overlake Park and Ride or the Overlake Transit Center. **Table A-5** shows the regional routes with detailed service levels.

**Table A-5. 2006 Regional Routes**

2006 Routes	Origin	Destination	Overlake Park and Ride*	Peak frequency (minutes)	Weekend Service	One-Way Service	Two-Way Service
225	Redmond	Bellevue, Seattle (Downtown)	2	45	N	√	
229	Redmond	Bellevue, Seattle (Downtown)	2	45	N	√	
230	Redmond	Bellevue, Kirkland	2	30	Y		√
232	Duvall	Woodinville, Redmond, Bellevue	1	20	N		√
245	Kirkland	Redmond, Bellevue	2	30	Y		√
247	Redmond	Bellevue, Renton, Kent	1 and 2	30	N	√	

\* 1 = Overlake Park and Ride 2 = Overlake Transit Center

Regional Express Service offers connections to urban centers, town centers and other destinations in the Puget Sound Region. All routes have 30 minute or less headway during the peak period. With the exception of the Sound Transit routes 545, 564 and 565, all other routes operate only in the peak hour and peak direction. With the exception of route 266, all routes make connections at the Overlake Park and Ride and/or the Overlake Transit Center. **Table A-6** shows the regional express routes with detailed service levels.

**Table A-6. 2006 Regional Express Routes**

<b>2006 Routes</b>	<b>Origin</b>	<b>Destination</b>	<b>Overlake Park and Ride*</b>	<b>Peak frequency (minutes)</b>	<b>Weekend Service</b>	<b>One Way Service</b>	<b>Two Way Service</b>
242	Redmond	Seattle (University of WA/ Montlake, Northgate)	1	30	N	√	
250	Redmond	Seattle (University of WA/ Montlake, Downtown)	1	30	N	√	
256	Redmond	Seattle (University of WA/ Montlake, Downtown)	2	30	N	√	
261	Redmond	Seattle (University of WA/ Montlake, Downtown)	1	20	N	√	
266	Redmond	Seattle (University of WA/ Montlake, Downtown)		20	N	√	
268	Redmond	Seattle (University of WA/ Montlake, Downtown)	2	30	N	√	
441	Edmunds	Redmond	1 and 2	30	N	√	
545	Redmond	Seattle (University of WA/ Montlake, Downtown)	1 and 2	30	Y		√
564	Redmond	Puyallup	2	30	N		√
565	Redmond	Federal Way	2	30	N		√
644	Redmond	Kirkland Kenmore	2	30	N	√	

Shaded rows indicate routes that operate during the AM and PM peak hour only.

\* 1 = Overlake Park and Ride 2 = Overlake Transit Center

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## Overlake Neighborhood Plan Update

# Transportation - No Action Alternative

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### New Streets

Project ID	Name	Description
RED-OV-079	NE 36th St Bridge Over SR 520	Construct new NE 36th St and bridge over SR 520 with grade separation of the SR 520 Trail in the vicinity of NE 36th St and NE 31st St. Improvements include 1 through lane in each direction, left turn lanes, bike lanes, sidewalks, street lights, storm drainage, right-of-way and easements.

### Nonmotorized

Project ID	Name	Description
RED-OV-083	SR 520 Trail Crossing Improvements at NE 40th St and NE 51st St	Additional signage, pavement markings and other treatments to improve pedestrian and bicycle crossings using at-grade crossing.
RED-OV-084	NE 40th St SR 520 Overpass Pedestrian Improvements	Work with WSDOT to improve pedestrian crossings over SR 520 at NE 40th St.

### Street Modifications

Project ID	Name	Description
BROTS-11.1	W Lake Sammamish Pkwy and NE 51st St	Add second SB lane to south leg of intersection, which results in revised channelization on the north leg SB of a thru and shared right-thru.
BROTS-22.3	156th Ave NE and Bel-Red Rd	Construct a southbound right-turn lane.
BROTS-31.0	Bel-Red Rd and W Lake Sammamish Pkwy	Construct an additional SB LTL.
BROTS-4.1	159th Ave NE and NE 40th St	Construct an additional NB LTL.

BROTS-79.0	148th Ave NE and NE 36th St	Provide dual SB LTLs and widen the WB approach to accommodate a left, shared left-thru, and right turn lanes.
BROTS-8.1	150th Ave NE and NE 40th St	Construct a NB RTL and combind two 150th Ave NE intersections at west intersection.
BROTS-85.0	150th Ave NE and NE 51st St	Add north leg to intersection and signalize intersection.
RED-OV-076	156th Ave NE and NE 31st St	Construct an additional WB LTL.
RED-OV-077	156th Ave NE and NE 36th St	Construct an additional SB LTL.
RED-OV-078	Bel-Red Rd and NE 30th St	Construct new right-in/right-out access to Microsoft Campus.

## Transit/HOV

Project ID	Name	Description
RED-OV-001	Redmond to Bellevue Arterial Bus Rapid Transit	Provide arterial bus rapid transit from downtown Redmond to downtown Bellevue. The general routes of this BRT line from downtown Redmond are: eastbound Redmond Way, southbound 148th Avenue NE, eastbound NE 40th Street, southbound 156th Avenue NE, southbound 156th Avenue NE and westbound NE 8th Street. An alternative route in the vicinity of the Overlake Activity Center would be from 156th Ave NE - westbound NE 31st Street, southbound 152nd Avenue NE and eastbound NE 24th Street. This route would have service frequencies of 10 minutes all day and include supporting improvements along the route.

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## Overlake Neighborhood Plan Update

# Transportation - Action Alternative

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### Freeway Modifications

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Project ID	Name	Description
RED-OV-043	SR 520 and I-405 Interchange	Work with WSDOT to add ramp capacity at SR 520 and I-405 Interchange.
RED-OV-044	SR 520 Eastbound Off-Ramp at WLSP Widening	Work with WSDOT to add a lane on the SR 520 off-ramp at West Lake Sammamish Parkway. The off-ramp improvements should include improved site distance, extending the two-lane further up the ramp and provide dual left turn lanes and a right turn lane. This project could also address BROTS project 030.
RED-OV-090	SR 520 Study and Improvements	Work with WSDOT and other stakeholders to study, design and construct improvements and modifications to the SR 520 corridor from I-405 to SR 202. Elements of the project would improve the flow of transit, freight and vehicles and be designed to accommodate the addition of light rail transit in at a yet to be determined portion of the SR 520 right of way.

### New Streets

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Project ID	Name	Description
RED-OV-037	NE 28th St, East	Construct new NE 28th Street between 156th Avenue NE and 152nd Avenue NE and design the street as a local access street using pedestrian supportive design with on-street parking and one through lane in each direction. Major street connections would be signalized.
RED-OV-039	150th Ave NE Extension	Extend 150th Avenue NE north from NE 51st Street to connect with Redmond West Campus. Improvements include 1 through lane in each direction, left turn lanes, bike lanes, curb, gutter, sidewalks, street lights and storm drainage.

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RED-OV-045	NE 28th St, West	Construct new NE 28th Street between new 151st Ave NE and 152nd Avenue NE and design the street as a local access street using pedestrian supportive design with on-street parking and one through lane in each direction. Major street connections would be signalized.
RED-OV-046	151st Ave NE, North	Construct new 151st Avenue NE between end of existing 151st Ave NE to new NE 28th Street and design the street as a local access street using pedestrian supportive design with on-street parking and one through lane in each direction. This corridor could also include light rail transit depending on final alignment.
RED-OV-048	NE 23rd St, East	Construct new NE 23rd Street from 152nd Avenue NE to Bel-Red Road and design the street as a local access street using pedestrian supportive design with on-street parking and one through lane in each direction. Major street connections would be signalized.
RED-OV-049	NE 23rd St, West	Construct new NE 23rd Street from 148th Avenue NE to 152nd Avenue NE and design the street as a local access street using pedestrian supportive design with on-street parking and one through lane in each direction. Major street connections would be signalized.
RED-OV-079	NE 36th St Bridge Over SR 520	Construct new NE 36th St and bridge over SR 520 with grade separation of the SR 520 Trail in the vicinity of NE 36th St and NE 31st St. Improvements include 1 through lane in each direction, left turn lanes, bike lanes, sidewalks, street lights, storm drainage, right-of-way and easements.
RED-OV-094	151st Ave NE, South	Construct new 151st Avenue NE between NE 20th Street and NE 24th Street and design the street as a local access street using pedestrian supportive design with on-street parking and one through lane in each direction. Major street connections would be signalized. This corridor could also include light rail transit depending on final alignment.

## Nonmotorized

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Project ID	Name	Description
RED-OV-016	NE 40th St Bike Lanes, East Section	Provide bicycle lanes/multi-use trail on NE 40th Street from 156th Avenue NE to West Lake Sammamish Pkwy. Work with Microsoft to design NE 40th Street as a gateway with multi-modal design features. This should include bicycle lanes on both sides of the street and/or wide (12-foot) multi-use trail on one side to accommodate both pedestrians and bicyclists. In addition, provide a bicycle connection with the existing bicycle lane on NE 40th Street east of 172nd Avenue NE.

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RED-OV-017	NE 40th St Bike Lanes, West Section	Provide bicycle lanes/multi-use trail on NE 40th Street from 148th Avenue NE to 156th Avenue NE. Work with Microsoft to design NE 40th Street as a gateway with multi-modal design features. This should include bicycle lanes on both sides of the street and/or wide (12-foot) multi-use trail on one side to accommodate both pedestrians and bicyclists.
RED-OV-018	NE 51st St Bike Lanes	Provide bicycle lanes on NE 51st Street in both directions from 148th Avenue NE to 154th Avenue NE. Install additional bike signage and pavement markings in existing bike lane between 154th Avenue NE and W Lake Sammamish Parkway.
RED-OV-019	150th Ave NE Bike Lanes	Provide bicycle lanes on 150th Avenue NE from NE 51st Street to NE 36th Street in both directions, and NE 36th Street from 148th Street to NE 31st Street, including the proposed bridge over SR 520.
RED-OV-020	NE 31st St Bike Lanes	Provide bicycle lanes along NE 31st Street between the new SR 520 overpass to 156th Avenue NE. From 156th Avenue NE, work with Microsoft for bicycle access to the new NE 30th Street and Bel-Red Road intersection. Access can include off-street multi-use paths and/or bicycle lanes.
RED-OV-021	Bel Red Rd Bike Lanes	Extend the existing westbound/southbound bicycle lane on Bel-Red Road north to the West Lake Sammamish Parkway intersection. Provide eastbound/northbound bicycle lanes on Bel-Red Road from NE 40th Street to West Sammamish Parkway. Bellevue has identified adding eastbound/northbound bicycle lanes on Bel-Red Road from 156th Avenue NE to NE 40th Street.
RED-OV-022	156th Ave NE Multi-use Trail, Middle Section	Provide a wide (12-foot) multi-use trail on the east side of 156th Avenue NE from NE 31st St to NE 40th St. This trail can expand upon the existing sidewalk to accommodate both pedestrians and bicyclists.
RED-OV-023	156th Ave NE Multi-use Trail, North & South Section	Provide a wide (12-foot) multi-use trail on the east side of 156th Avenue NE from Bel-Red Road to NE 31st Street and from NE 40th Street to NE 51st Street. This trail can expand upon the existing sidewalk to accommodate both pedestrians and bicyclists.
RED-OV-024	148th Ave NE Multi-use Trail	Provide a wide (12-foot) multi-use trail on the east side of 148th Avenue NE from NE 36th Street to Redmond Way. This trail can expand upon the existing sidewalk to accommodate both pedestrians and bicyclists.

RED-OV-025	W Lake Sammamish Pkwy Nonmotorized Signage	Provide interim nonmotorized facilities by striping the west side of West Lake Sammamish Parkway between NE 51st Street and Bel-Red Road to include a bicycle lane and pedestrian path. Provide additional signage and street pavement markings for bicycles on the east side of the street.
RED-OV-026	SR 520 Trail Grade Separation at NE 40th St	Grade separate SR 520 Trail at NE 40th Street.
RED-OV-027	SR 520 Trail Grade Separation at NE 51st St and NE 148th Ave NE	Grade separate SR 520 Trail at NE 51st Street and 148th Ave NE.
RED-OV-028	150th Ave NE Sidewalk	Provide missing sidewalk sections along 150th Ave NE between NE 40th St and NE 51st St.
RED-OV-029	148th Ave NE Grade Separation Pedestrian Overpass	Provide a grade-separated pedestrian overpass that crosses 148th Avenue NE in the vicinity of NE 22nd Street.
RED-OV-030	148th Ave NE Sidewalk at SR 520	Provide a 12' sidewalk on the east side of 148th Avenue NE from NE 27th Street to NE 29th Street (SR 520 overpass) where sidewalks are not provided.
RED-OV-032	NE 40th St Transit Center SR 520 Pedestrian Crossing	Provide a new direct pedestrian connection over SR 520 between the Overlake Transit Center and the Microsoft west campus (near NE 38th Street alignment).
RED-OV-034a	Signalized Mid-Block Crossing	Provide a signalized mid-block crossing on 156th Avenue NE between NE 36th Street and NE 31st Street
RED-OV-034b	Signalized Mid-Block Crossing	Provide a signalized mid-block crossing on 156th Avenue NE between NE 45th Street and NE 51st Street, near the existing apartment driveway.
RED-OV-035a	Mid-Block Crossings	Provide a mid-block crossing with in-pavement lighting on 152nd Avenue NE between NE 20th Street and NE 24th Street
RED-OV-035b	Mid-Block Crossings	Provide a mid-block crossing with in-pavement lighting on 152nd Avenue NE between NE 24th Street and NE 31st Street
RED-OV-035c	Mid-Block Crossings	Provide a mid-block crossing with in-pavement lighting on 150th Avenue NE between NE 40th Street and NE 51st Street
RED-OV-066	NE 51st St Bike Lanes	Construct standard bike lanes both directions from 156th Ave NE to W Lake Sammamish Pkwy.

RED-OV-068	NE 26th St Multi-Use Urban Pathway	Construct nonmotorized path from 148th Ave NE to 156th Ave NE. Improvements would include a 12' wide paved path in a 28' wide corridor that included paved plazas, landscaping and pedestrian lighting. Pathway could be constructed parallel to transportation facilities, such as light rail transit under some alternatives which would reduce the need for additional corridor width beyond the 12' wide trail.
RED-OV-081	NE 51st St Bike Lane Improvements	Install additional bike signage and pavement markings in existing bike lane between 154th Avenue NE and W Lake Sammamish Parkway.
RED-OV-083	SR 520 Trail Crossing Improvements at NE 40th St and NE 51st St	Additional signage, pavement markings and other treatments to improve pedestrian and bicycle crossings using at-grade crossing.
RED-OV-084	NE 40th St SR 520 Overpass Pedestrian Improvements	Work with WSDOT to improve pedestrian crossings over SR 520 at NE 40th St.

## Parking

Project ID	Name	Description
RED-OV-055	Residential Parking Program	Establish residential parking permit program in residential areas adjacent to employment and commercial areas in conjunction with implementation of efforts to limit the parking supply or charge for parking.
RED-OV-056	Parking Standards by Use	Add further definition to existing system of defining parking standards by use.
RED-OV-057	Eliminate minimum parking standards	Work with developers to eliminate minimum parking standards while better accomodating access for delivery and moving trucks.
RED-OV-058	Eliminate Allowances above 3 spaces per 1,000 SF	Maintain 3 spaces per 1,000 SF office space maximum. Eliminate allowance for 3.5 spaces per 1,000 SF.
RED-OV-059	Develop Parking Standards that Relate to Transit Availability	Reduce parking standards for developments near transit facilities such as the park and ride lot and transit center. Reduce parking standards further as transit service improves.
RED-OV-060	Mixed Use Parking Credit	Develop parking credits for mixed use developments.
RED-OV-061	Paid Parking	Create incentives for employers to elimnate parking subsidies to employees through development agreements.

RED-OV-062	Parking Time Limits	On-street parking in commercial zoned areas would be designated for commercial use with time limits during business hours.
RED-OV-063	Separate Parking and Office Space Costs	Require commercial lease to separate out parking costs from office rental space costs.
RED-OV-070	On-Street Paid Parking	Reduce parking subsidies and better manage on-street parking supply by implmenting paid parking for on-street parking spaces.
RED-OV-091	Parking Development and Management Plan	Create and implement a parking development and management program for Overlake that: minimizes on-site surface parking; encourages shared, clustered parking to reduce the total number of stalls needed, and to increase the economic and aesthetic potential of the area; encourages structured parking; and maximizes on-street parking, particularly for use by those shopping or visiting Overlake.

## Street Modifications

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Project ID	Name	Description
BROTS-11.1	W Lake Sammamish Pkwy and NE 51st St	Add second SB lane to south leg of intersection, which results in revised channelization on the north leg SB of a thru and shared right-thru.
BROTS-22.3	156th Ave NE and Bel-Red Rd	Construct a southbound right-turn lane.
BROTS-31.0	Bel-Red Rd and W Lake Sammamish Pkwy	Construct an additional SB LTL.
BROTS-4.1	159th Ave NE and NE 40th St	Construct an additional NB LTL.
BROTS-79.0	148th Ave NE and NE 36th St	Provide dual SB LTLs and widen the WB approach to accommodate a left, shared left-thru, and right turn lanes.
BROTS-8.1	150th Ave NE and NE 40th St	Construct a NB RTL and combind two 150th Ave NE intersections at west intersection.
BROTS-85.0	150th Ave NE and NE 51st St	Add north leg to intersection and signalize intersection.
RED-OV-040	W Lake Sammamish Pkwy Widening	Widen West Lake Samm Pkwy from NE 51st St to Bel-Red Rd. Improvements include 2 through lane in each direction, left turn lanes, bike lanes, curb, gutter, sidewalks, street lights, storm drainage, underground power, right-of-way and extending the multi-use path on the east side of West Lake Sammamish Parkway.

RED-OV-041	148th Ave NE and NE 24th St Intersection	Add left turn lanes to make dual left turn lanes on the eastbound and westbound approaches on NE 24th Street at 148th Avenue NE.
RED-OV-065	152nd Ave NE Multimodal Corridor	Implement a multi-modal pedestrian corridor concept on 152nd Avenue NE from NE 20th Street to NE 31st Street to create a lively and active signature street through the Overlake Mixed-Use Core. Improvements include 1 through lane in each direction, accommodations for bus-based transit connections to LRT, left turn lanes, planted medians, bike lanes, parking, pedestrian supportive sidewalks, street lights, pedestrian amenities, storm drainage, right-of-way and easements. This corridor could also include light rail transit depending on final alignment.
RED-OV-074	148th Ave NE and Old Redmond Rd	Lengthen northbound left-turn lane on 148th Ave NE.
RED-OV-075	NE 24th St Access Management	Implement more stringent access management along NE 24th St from 148th Ave NE to Bel-Red Rd to improve efficiency and safety in the corridor.
RED-OV-076	156th Ave NE and NE 31st St	Construct an additional WB LTL.
RED-OV-077	156th Ave NE and NE 36th St	Construct an additional SB LTL.
RED-OV-078	Bel-Red Rd and NE 30th St	Construct new right-in/right-out access to Microsoft Campus.
RED-OV-080	152nd Ave NE Rechannelization	Reconfigure 152nd Ave NE from NE 20th St to NE 31st St to 1 through lane in each direction, center left turn lane, bike lanes and minor improvements to pedestrian amenities.
RED-OV-082	148th Ave NE Access Management	Implement more stringent access management along 148th Ave NE from NE 20th St to NE 36th St to improve efficiency and safety in the corridor.
RED-OV-086	Redmond Way and 148th Ave NE	Widen intersection to separate the northbound share through and left turn lane to have dual left turn lanes and two through lanes to improve traffic flow.
RED-OV-087	Bel-Red Rd Widening	Widen Bel-Red Rd from W Lake Sammamish Pkwy to NE 40th St. Improvements include 2 through lane in each direction, left turn lanes, bike lanes, curb, gutter, sidewalks, street lights and storm drainage.
RED-OV-088	Bel-Red Rd and 148th Ave NE	Work with the City of Bellevue to add additional capacity at this intersection. This would be accomplished by adding an eastbound and westbound left turn lane resulting dual left turn lanes.

RED-OV-092      Redmond Way and 148th Ave NE      Modify channelization at intersection so signal operation can be altered to run the eastbound and westbound left turn movements concurrently.

## Transit/HOV

Project ID	Name	Description
RED-OV-001	Redmond to Bellevue Arterial Bus Rapid Transit	Provide arterial bus rapid transit (BRT) from downtown Redmond to downtown Bellevue. The preferred route of this BRT line in the Overlake Neighborhood is: 148th Avenue NE, NE 40th Street, 156th Avenue NE, NE 31st St, 152nd Ave NE and NE 24th or 20th St. This route would have service frequencies of 10 minutes all day and include supporting improvements along the route, such as unique shelters, displays identifying when the next bus would arrive and pay before you board type of system.
RED-OV-002	Overlake to Eastgate Arterial Bus Rapid Transit	Work with King County Metro or Sound Transit and Bellevue to provide a north-south arterial bus rapid transit line that connects the NE 40th St Transit Center and Eastgate Park and Ride Lot. This route would have service frequencies of 10 minutes all day and include supporting improvements along the route.
RED-OV-003	BRT Shelters	Work with King County Metro and Sound Transit to provide uniquely designed bus shelters for the BRT lines, and the buses on the BRT line should be designed for rapid passenger boarding and alighting.
RED-OV-004	Lynnwood/Canyon Park Peak Period Commuter Bus	Work with Sound Transit to provide peak period express services between Overlake park and ride lot and Lynnwood/Canyon Park park and ride lots.
RED-OV-005	Issaquah/Sammamish Peak Period Commuter Bus	Work with Sound Transit and King County Metro to provide peak period express services between Overlake park and ride lot and Issaquah, Issaquah Highlands and Sammamish park and ride lots.
RED-OV-008a	148th Avenue NE and NE 40th Street	Widen intersection to add northbound transit queue bypass lane.
RED-OV-008b	148th Avenue NE and NE 51st Street	Widen intersection to add northbound transit queue bypass lane.
RED-OV-008c	148th Avenue NE and Old Redmond Road	Widen intersection to add southbound transit queue bypass lane.
RED-OV-008g	156th Avenue NE and NE 36th Street	Widen intersection to add northbound transit queue bypass lane.
RED-OV-008h	156th Avenue NE and NE 31st Street	Widen intersection to add northbound transit queue bypass lane.

RED-OV-009	Seattle to Downtown Redmond Light Rail Transit (LRT) Corridor	Work with Sound Transit and Eastside cities to provide light rail transit across Lake Washington from downtown Seattle to downtown Bellevue, and from downtown Bellevue to downtown Redmond through the Overlake area. Alternatives to be evaluated in the Overlake Mixed-Use Core include the 152nd Ave NE corridor, a new 151st Ave NE corridor or a new corridor behind Safeway and the 152nd Ave NE corridor. The route then would continue north along the eastside of SR 520. Light rail service would be throughout the day with frequencies shorter than 10 minutes.
RED-OV-011	NE 40th Street LRT Station	Provide a light rail station in the vicinity of the NE 40th Street Transit Center southwest of the NE 40th Street and 156th Ave NE intersection.
RED-OV-014	Marymoor Park Transit Access	Allow buses to travel through Marymoor Park and provide travel time advantage for buses.
RED-OV-071	NE 40th St and SR 520 Interchange HOV Direct Access Ramps	With the eventual construction of the replacement SR 520 floating bridge the HOV lanes will be moved to the inside along all of SR 520. In order for transit to take full advantage of the HOV lanes construct HOV direct access ramps from the center HOV lanes to NE 40th St and provide transit stops on the ramps with improved nonmotorized access to the NE 40th St Transit Center.
RED-OV-085	North Seattle Peak Period Commuter Bus	Work with Sound Transit and King County Metro to provide improved peak period express services between NE 40th St Transit Center and North Seattle.
RED-OV-089	Transit Signal Priority	148th Ave NE at Redmond Way, Old Redmond Rd, NE 51st St and NE 40th St; 156th Ave NE at NE 40th St, NE 36th St and NE 31st St; and 152nd Ave NE at NE 24th St and NE 20th St.
RED-OV-093	Overlake Mixed-Use Core LRT Station	Provide a light rail station in the vicinity of just north NE 24th Street along either 151st Avenue NE or 152nd Avenue NE.

## Transportation Demand Management

Project ID	Name	Description
RED-OV-051	40% Non-SOV Goal	Establish a non-SOV mode share goal of 40 percent for 2030 peak period work trips for employees having jobs located in the Overlake Neighborhood.

RED-OV-052	Expanded TDM	Expand the TDM program to achieve the TDM policy adopted in the Redmond Comprehensive Plan (TR -37).
RED-OV-053	Enhanced TDM Plan	Adopt the enhanced TDM plan for the Overlake Neighborhood that is consistent with a new regional Commute Trip Reduction (CTR) plan.
RED-OV-054	Establish Overlake GTEC	Work with the regional CTR Board to designate the Overlake Urban Center as a Growth and Transportation Efficiency Center (GTEC) and seek a certification from a regional planning agency.
RED-OV-067	Adopt New CTR Ordinance	Adopt a new CTR ordinance that will reflect the TDM actions in the Overlake Neighborhood Plan and implement actions by aggressively seeking funding for programs.